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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,461	12/26/2001	Michael Kaschke	00118	2947

7590

05/13/2004

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EXAMINER

CHOI, WILLIAM C

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AA

Office Action Summary

Application No.

10/025,461

Applicant(s)

KASCHKE ET AL.

Examiner

William C. Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/29/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-12, 15-17, 19-28, 30-34 and 36 is/are rejected.
- 7) ☒ Claim(s) 4, 13, 14, 18, 29 and 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Examiner's Comment

The indicated allowability of claims 2, 8-10, 12, 16, 22-25, 31-34 and 36 is withdrawn in view of the newly discovered reference(s) below. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2, 16 and 22 (and dependent claims 23-25) are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention. Specifically in regard to these claims, applicant discloses wherein said switchover device includes "a mirror switchable into and out of said beam path". Although applicant does disclose this limitation in the specification (page 7, lines 21-28), applicant does not disclose how this limitation functionally comes about, which is critical to making the invention. Upon further inspection of applicants' remarks filed July 14, 2003, in response to the original 112 rejection of this limitation on page 3, last paragraph, lines 6-8 in the office action dated March 13, 2003, shows that it

was never addressed, thereby rendering these claims non-enabling. Claims 23-25 inherit the rejection from their parent claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5-7, 11, 15, 17, 19-21, 26-28 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Kelly (U.S. 6,239,908 B1).

In regard to claims 1 and 15, Kelly discloses a stereoscopic display system (Figure 4) comprising: a single display for displaying right and left partial images sequentially in time (column 5, lines 49-53, Figure 4, "202"); a first optical arrangement for defining a common viewing beam path along which said right and left partial images are transmitted (column 5, lines 50-53, Figure 4, "206"); a second optical arrangement for splitting said common viewing beam path into separate first and second component beam paths for viewing only said left and only said right partial images, respectively (column 5, lines 53-61, Figure 4, "208") and a switchover device for alternately coupling information shown on said display from said common viewing beam path separately into said first and second component beam paths in synchronism with the presentation of said left and right partial images on said display (column 5, lines 28-33, re "means for alternating the polarization state of the displayed image" & Figure 4, "208").

Regarding claims 3 and 17, Kelly discloses wherein said switchover device includes a polarization switch mounted in said common viewing beam path (column 5, lines 31-33, Figure 4, "208") and would inherently comprise a light source for transmitting light along an illuminating beam path toward said display, this being reasonably assumed from Kelly disclosing wherein said image display comprises a conventional liquid crystal array (column 5, lines 28-30), which would need a light source in order to operate.

Regarding claim 5 and 19, Kelly discloses wherein the second optical arrangement comprises a polarization beam splitter for splitting said common viewing beam path into said first and second component beam paths (column 5, lines 31-33, Figure 4, "208").

Regarding claims 6 and 20, Kelly discloses wherein the switchover device includes a polarization switch mounted in said common viewing beam path (column 5, lines 28-33, re "means for alternating the polarization state of the displayed image" & Figure 4, "208").

Regarding claims 7 and 21, Kelly discloses wherein the second optical arrangement includes a transfer optic in one of the separate first and second component beam paths (column 5, lines 39-40, Figure 4, "214").

In regard to claim 11, Kelly discloses a stereoscopic display system (Figure 4) comprising: a single display for sequentially displaying right and left partial images (column 5, lines 49-53, Figure 4, "202"); an optical arrangement for defining an illuminating beam path and for illuminating said display sequentially in time with light

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having first and second directions of polarization different from each other (column 5, lines 49-61, Figure 4, "206, 208, 210"); and, said optical arrangement including a polarization beam splitter mounted in said illuminating beam path (column 5, lines 31-33, Figure 4, "208").

In regard to claims 26, Kelly discloses a stereoscopic display system (Figure 4) comprising: a single display for displaying right and left partial images sequentially in time (column 5, lines 49-53, Figure 4, "202"); a first optical arrangement for defining a common viewing beam path along which said right and left partial images are transmitted (column 5, lines 50-53, Figure 4, "206"); a second optical arrangement for splitting said common viewing beam path into separate first and second component beam paths for viewing only said left and only said right partial images, respectively (column 5, lines 53-61, Figure 4, "208"); a switchover device for alternately coupling information shown on said display from said common viewing beam path separately into said first and second component beam paths in synchronism with the presentation of said left and right partial images on said display (column 5, lines 28-33, re "means for alternating the polarization state of the displayed image" & Figure 4, "208"); and said switchover device including a polarization switch mounted in said common viewing beam path (column 5, lines 31-33, Figure 4, "208") and a polarization beam splitter for splitting said common viewing beam path into said first and second component beam paths (column 5, lines 31-33, Figure 4, "208").

Regarding claim 27, the display system of Kelly would inherently comprise a light source for transmitting light along an illuminating beam path toward said display, this

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being reasonably assumed from Kelly disclosing wherein said image display comprises a conventional liquid crystal array (column 5, lines 28-30), which would need a light source in order to operate.

Regarding claim 28, Kelly discloses wherein the switchover device includes a polarization switch mounted in said common viewing beam path (column 5, lines 28-33, re "means for alternating the polarization state of the displayed image" & Figure 4, "208").

Regarding claim 30, Kelly discloses wherein the second optical arrangement includes a transfer optic in one of the separate first and second component beam paths (column 5, lines 39-40, Figure 4, "214").

Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Sudo (U.S. 5,142,642).

In regard to claim 12, Sudo discloses a stereoscopic display system comprising a single display for sequentially displaying right and left partial images (column 11, lines 53-55, Figure 5, "49"); an optical arrangement for defining an illuminating beam path and for illuminating said display sequentially in time (column 11, lines 20-55, Figure 5, "41-49") with light having first and second directions of polarization different from each other (column 11, lines 31-43, Figure 5, "43, 45"); said optical arrangement including a polarization beam splitter mounted in said illuminating beam path (column 11, lines 33-35, Figure 5, "44"); and said optical arrangement further including two light sources for emitting respective beams of light (column 11, lines 22-28, Figure 5, "I₁, I₂") and said

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polarization beam splitter being mounted to receive said beams of light and to coaxially superpose said beams of light one upon the other (column 11, lines 40-43).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly as applied to claim 1 above, and further in view of Heacock et al (U.S. 5,539,422).

In regard to claims 8 and 9, Kelly discloses the stereoscopic display system as set forth above, but does not specifically disclose wherein said display system is integrated into a spectacle frame, which can be worn by a person on the head.

However, Kelly does disclose wherein the display system is used in a binocular system (column 1, lines 16-19) and within the same field of endeavor, Heacock et al teaches wherein it is well known to incorporate stereoscopic display systems in binoculars or head-up display systems (i.e. spectacle frame) (column 16, lines 19-29, Figure 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the stereoscopic display system of Kelly to be incorporated into a spectacle frame, which can be worn by a person on the head, since Kelly does disclose wherein the display system is used in a binocular system and

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Heacock et al teaches wherein it is well known to incorporate stereoscopic display systems in binoculars or head-up display systems.

Regarding claim 10, Kelly discloses wherein said second optical arrangement including a beam splitter for splitting said common viewing beam path into said first and second component beam paths (column 5, lines 31-33, Figure 4, "208"); and, said first optical arrangement including a deflecting mirror disposed between said display and said beam splitter (column 5, lines 34-37, Figure 4, "206").

Claims 31-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly as applied to claim 26 above, and further in view of Heacock et al.

In regard to claims 31 and 32, Kelly discloses the stereoscopic display system as set forth above, but does not specifically disclose wherein said display system is integrated into a spectacle frame, which can be worn by a person on the head.

However, Kelly does disclose wherein the display system is used in a binocular system (column 1, lines 16-19) and within the same field of endeavor, Heacock et al teaches wherein it is well known to incorporate stereoscopic display systems in binoculars or head-up display systems (i.e. spectacle frame) (column 16, lines 19-29, Figure 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the stereoscopic display system of Kelly to be incorporated into a spectacle frame, which can be worn by a person on the head, since Kelly does disclose wherein the display system is used in a binocular system and Heacock et al teaches wherein it is well known to incorporate stereoscopic display systems in binoculars or head-up display systems.

Regarding claim 33, Kelly discloses wherein said switchover device includes a polarization switch mounted in said common viewing beam path (column 5, lines 31-33, Figure 4, "208") and would inherently comprise a light source for transmitting light along an illuminating beam path toward said display, this being reasonably assumed from Kelly disclosing wherein said image display comprises a conventional liquid crystal array (column 5, lines 28-30), which would need a light source in order to operate.

Regarding claim 34, Kelly discloses wherein the polarization switch is mounted in said common viewing beam path (column 5, lines 28-33, re "means for alternating the polarization state of the displayed image" & Figure 4, "208").

Regarding claim 36, Kelly discloses wherein the second optical arrangement includes a transfer optic in one of the separate first and second component beam paths (column 5, lines 39-40, Figure 4, "214").

Allowable Subject Matter

Claims 4, 13, 14, 18, 29 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in claims 4, 18, 26 and 35: a stereoscopic display system as claimed in claims 3 and 17, respectively, specifically comprising polarization filters mounted in corresponding ones

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of said first and second component beam paths, each having respective pass-through directions crossed with respect to each other.

The prior art fails to teach a combination of all the claimed features as presented in claims 13 and 14: a stereoscopic display as claimed, specifically comprising a color filter wheel common to both of said light sources and mounted downstream thereof.

Response to Arguments

Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (571) 272-2324. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

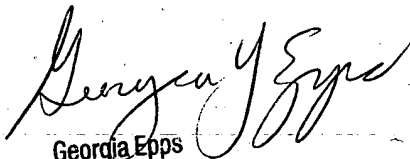
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

W.C.
William Choi
Patent Examiner
Art Unit 2873
May 7, 2004


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